

THE GENUS *RHYNCHOSIA* (FABACEAE) IN ALABAMA**Michael Woods and Jann Key**

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ABSTRACT

The genus *Rhynchosia* (Fabaceae), commonly known as snout bean, is recognized as consisting of five species and no infraspecific taxa in Alabama. The most common species are *R. tomentosa*, *R. reniformis*, and *R. difformis*. The least common species are *R. cytisoides* and *R. minima*. Dichotomous keys and descriptions were generated based on morphological features of the vegetative and reproductive structures of the more than 400 specimens studied during this project. Data for the county-level distribution maps were compiled entirely from herbaria vouchers. *Phytologia* 91(1):3-17, (April, 2009).

KEY WORDS: Fabaceae, Leguminosae, *Rhynchosia*, Alabama

Rhynchosia Loureiro, commonly known as snout bean, is a member of the legume family Fabaceae (Leguminosae), subfamily Papilionoideae, tribe Phaseoleae, subtribe Cajaninae (Lackey 1981). The genus consists of approximately 200 species and occurs in both the eastern and western hemisphere in warm temperate and tropical regions (Gear 1978). Fourteen species and two infraspecific taxa of *Rhynchosia* have been reported from the United States (NatureServe 2005). Of these, ten species and one infraspecific taxon have been reported from the southeastern United States (Isely 1990).

Vail (1899) revised the genus for the taxa occurring in the United States. She recognized 16 taxa but used the genus *Dolicholus* Medikus and listed *Rhynchosia* as a synonym. For the next 60 years, the names *Dolicholus* and *Rhynchosia* were both used in the literature. It was not until 1959 when, under the provisions of the *International Code of Botanical Nomenclature*, *Rhynchosia* was conserved against *Dolicholus* (Rickett and Stafleu 1959).

In the only comprehensive revision of the New World species of *Rhynchosia*, Grear (1978) solved many of the problems of nomenclature, taxonomy and distribution with which previous workers had dealt.

METHODS

The data for the distribution maps were gathered from more than 400 specimens deposited in the herbaria of Troy University (TROY), Auburn University (AUA), The University of Alabama (UNA), The University of South Alabama (USAM), Jacksonville State University (JSU), University of North Alabama (UNAF), Smithsonian Institution (US), and Vanderbilt University (VDB), which is located at the Botanical Institute of Texas (BRIT) in Fort Worth.

The dichotomous keys are modifications of Isely (1990) and Weakley (2007); however, all measurements are based on morphological features of the vegetative and reproductive structures of the plants analyzed during this study. Descriptions for each taxon are based on Grear (1978) and Isely (1990); however, measurements were taken from the specimens studied and incorporated into the descriptions if they differed. Illustrations of *Rhynchosia cytisoides* (Bertoloni) Wilbur and *R. minima* (Linnaeus) de Candolle are by the first author. All other illustrations are from Britton and Brown (1913). The lists of specimens examined are limited to one record from each county.

Herbarium specimens were initially divided into groups based on overall morphological similarity and the species concepts established by Isely (1990) and Weakley (2007). Morphological measurements were then made from selective specimens of each group.

RESULTS

Five species and no infraspecific taxa of *Rhynchosia* have been documented from Alabama. Based on herbarium specimens, the most common species are *R. tomentosa* (Linnaeus) Hooker & Arnott (48 counties), *R. reniformis* de Candolle (24 counties), and *R. difformis* (Elliott) de Candolle (16 counties). The least common species are *R.*

cytisoides (Bertoloni) Wilbur (8 counties) and *R. minima* (Linnaeus) de Candolle (2 counties).

TAXONOMIC TREATMENT OF *RHYNCHOSIA*

- Rhynchosia*** Loureiro, Fl. Cochinch. 425, 460. 1790. nom. cons.
Dolicholus Medikus, Vorl. Churpf. Phys. Okon. Ges. 2: 354. 1787. nom. rejic.
Cylista Aiton, Hort. Kew. ed. 1, 3: 36, 512. 1789. nom. rejic.
Arcyphyllum Elliott, Jour. Acad. Phila. 1: 371. 1818.
Austerium Poit. ex DC., Prodr. 2: 385. 1825. nom. nudum.
Polytropia Presl, Symb. Bot. 21, t. 13. 1831.
Nomismia Wight & Arnott, Prodr. 1: 236. 1834.
Cyanospermum Wight & Arnott, Prodr. 1: 259. 1834.
Pitcheria Nuttall, Jour. Acad. Phila. 7: 93. 1834.
Hidrosia E. Meyer, Comm. Pl. Afr. Aust. 1: 89. 1836.
Orthodanum E. Meyer, Comm. Pl. Afr. Aust. 1: 131. 1836.
Copisma E. Meyer, Comm. Pl. Afr. Aust. 1: 132. 1836.
Chrysoscias E. Meyer, Comm. Pl. Afr. Aust. 1: 139. 1836.
Rhynchosia J. Macfadyen, Fl. Jam. 1: 275. 1837.
Phyllomatia Benth., Ann. Wien. Mus. 2: 113. 1839.
Ptychocentrum Benth., Ann. Wien. Mus. 2: 113. 1839.
Chrysonias Benth., Ann. Wien. Mus. 2: 114. 1839.
Phaseolus subgenus *Rhynchosia* Eaton & Wright, N. Amer. Bot. 353. 1840.
Sigmodostyles Meissn., Hook. Lond. Jour. Bot. 2: 93. 1843.
Walpersia Meissn. ex Krauss, Flora 27: 357. 1844.
Rhinchosia Zoll. & Mor., Natuur-en Geneesk. Arch. Nederl. Indie 3: 78. 1846.
Stipellaria Klotz., Schomb. Faun. Fl. Brit. Gui. 3: 1203. 1848. nom. nudum.
Hydrosia A. Juss., Orbigny: Dict. Hist. Nat. 7: 270. 1849.
Leycephyllum Piper, Jour. Wash. Acad. 14: 363. 1924.
Leucopterum Small, Man. S. E. Fl. 713. 1933.

Roots perennial. Stems herbaceous, trailing, twining, or erect, simple or branched, glabrous to pubescent. Leaves unifoliate or pinnately trifoliate; petioles 1-90 mm long; leaflets entire, elliptic to rhomboid, 10-70 mm long, glabrous to pubescent, glandular punctate

with yellow, dome-shaped, resin glands. Inflorescence pseudoracemes, axillary or short terminal; peduncles 1-90 mm long. Calyx 2.5-12.0 mm long; corolla yellow, some with purple to brown veins, 4-10 mm long; stamens 10, diadelphous (9 + 1); styles glabrous; ovaries glabrous to pubescent; ovules 1-2. Fruits 10-20 mm long, dehiscent, short and broad, asymmetrically ovate to oblong to falcate-oblong, laterally compressed, short-beaked, glandular-punctate, pubescent.

KEY TO THE ALABAMA SPECIES OF *RHYNCHOSIA*

1. Leaves unifoliolate, upper ones rarely trifoliolate.....1. *R. reniformis*
1. Leaves trifoliolate, lower ones rarely unifoliolate2
 2. Corolla exceeding calyx.....3
 2. Corolla shorter than or equal to calyx.....4
3. Plants erect; flowers single (-3) in leaf axils.....2. *R. cytisoides*
3. Plants trailing or twining; flowers in racemes.....3. *R. minima*
 4. Plants erect; calyx 6-9 mm long; lower leaflet surface grayish tomentose.....4. *R. tomentosa*
 4. Plants trailing, twining, semi-erect; calyx 8-12 mm long; lower leaflet surface villose.....5. *R. difformis*

1. *Rhynchosia reniformis* de Candolle, Prodr. 2: 384. 1825.

[Figure 1a]

Trifolium simplicifolium Walter, Fl. Carol. 184. 1788.

Glycine tomentosa Linnaeus var. *monophylla* Michaux, Fl. Bor.-Amer. 2: 63. 1803.

Glycine reniformis Pursh, Fl. Amer. Sept. 486. 1814, nom. illegit.

Arcyphyllum simplicifolium (Walter) Elliott, J. Acad. Nat. Sci. Philadelphia 2: 115. 1818.

Glycine monophylla (Michaux) Nuttall, Gen. N. Amer. Pl. 2: 115. 1818, nom. illegit. et non Linnaeus 1767.

Glycine simplicifolia (Walter) Elliott, Sketch Bot. S. Carolina 2: 234. 1823.

Phaseolus reniformis (de Candolle) Eaton & J. Wright, Man. Bot., ed. 8. 353. 1840, nom. illegit.

Psoralea alnifolia Bertoloni, Mem. Reale Accad. Sci. Ist. Bologna 2: 274, t. 4(1). 1850.

Psoralea alopecurina Bertoloni, Mem. Reale Accad. Sci. Ist. Bologna 2: 275, t. 4(2). 1850.

Rhynchosia simplicifolia (Walter) A. W. Wood, Class-Book Bot., ed. 1861. 321. 1861, non de Candolle 1825.

Rhynchosia tomentosa (Linnaeus) Hooker & Arnott var. *monophylla* (Michaux) Torrey & A. Gray, Fl. N. Amer. 1: 284. 1838.

Rhynchosia tomentosa (Linnaeus) Hooker & Arnott, var. *intermedia* Torrey & A. Gray, Fl. N. Amer. 1: 285. 1838.

Dolicholus simplicifolius (Walter) Vail, Bull. Torrey Bot. Club 26: 114. 1899.

Dolicholus intermedius (Torrey & A. Gray) Vail, Bull. Torrey Bot. Club 26: 115. 1899.

Rhynchosia intermedia (Torrey & A. Gray) Small, Man. S.E. Fl. 715. 1933.

Rhynchosia simplicifolia (Walter) A. W. Wood var.

intermedia (Torrey & A. Gray) F. J. Hermann, J. Wash. Acad. Sci. 38: 238. 1948.

Roots perennial. Stems erect, simple or branched, villous. Leaves 4-6, unifoliate, upper one rarely trifoliate; petioles 20-45 mm long; leaflets reniform or subcordate, 25-50 mm long, strigose above, hirsute beneath, especially along the veins. Inflorescence short and subsessile; peduncles 5-20 mm long. Calyx 7-10 mm long, lobes longer than tube; corolla yellow, 6.0-9.5 mm long, subequal to calyx. Fruits shortly oblong or elliptic-oblong, 12-18 mm long, villous especially along the sutures.

Habitat and distribution in Alabama: dry woods, sandhills, fields and roadsides; throughout the southern half of the state (Figure 1b).

Specimens examined. Autauga County: *Kral 33542*, 4 October 1968 (VDB). Baldwin County: *Lelong 7868*, 15 June 1974 (USAM). Barbour County: *MacDonald 10465*, 12 May 1997 (VDB). Bullock County: *Keys 83*, 10 May 1963 (AUA). Butler County: *Diamond 17963*, 23 September 2007 (TROY). Chilton County: *Freeman 714*, 20 May 1971 (AUA). Choctaw County: *Kral 39661*, 4 June 1970 (VDB). Clarke County: *Kral 43048*, 6 June 1971 (VDB). Coffee County: *Martin 61*, 24 June 1999 (TROY). Covington County:

Diamond 14481, 7 July 2004 (AUA, TROY, UNA, VDB). Crenshaw County: *Diamond 10357*, 23 July 1996 (AUA). Dale County: *Pennington 664*, 7 May 2000 (TROY). Dallas County: *Whetstone 14080*, 9 June 1984 (JSU). Escambia County: *Brittain 131*, 5 May 1995 (TROY). Geneva County: *Moore 435-69*, 25 July 1969 (AUA). Hale County: *McKitrick 53*, 4 July 1971 (AUA). Henry County: *Kral 31959*, 24 July 1968 (VDB). Lee County: *Barnes 158*, 22 May 1969 (AUA). Macon County: *Redmond 147*, 28 May 1970 (AUA). Mobile County: *Lelong 3066*, 21 April 1967 (USAM). Monroe County: *Diamond 15899*, 8 October 2005 (AUA, TROY, VDB). Pike County: *Diamond 11059*, 28 July 1997 (AUA). Russell County: *Gil 151*, 2 May 2003 (AUA). Tuscaloosa County: *Spaulding 11842*, 11 May 2003 (JSU, TROY, UNA, VDB).

2. *Rhynchosia cytisoides* (Bertoloni) Wilbur, *Rhodora* 64: 60. 1962.
[Figure 1c]

Pitcheria galactoides Nuttall, *J. Acad. Nat. Sci. Philadelphia* 7: 93. 1834.

Pitcheria galactoides Nuttall var. *parvifolia* Torrey & A. Gray, *Fl. N. Amer.* 1: 286. 1838.

Rhynchosia galactoides (Nuttall) Endlicher & Walpers, in Walpers, *Repert. Bot. Syst.* 1: 790. 1842, non (Kunth) de Candolle 1825.

Lespedeza cytisoides Bertoloni, *Mem. Reale Accad. Sci. Ist. Bologna* 2: 278. 1850.

Rhynchosia pitcheria Burkart, *Darwiniana* 11(2): 268. 1957.

Roots perennial. Stems erect, branched, glabrous to villous. Leaves trifoliate; petioles 1-4 mm long; leaflets ovate to elliptic, 10-20 mm long, finely strigose above, puberulent beneath. Inflorescence 1(-3) flowered; peduncles 1-3 mm long. Calyx 5-7 mm long, lobes equal or short than tube; corolla yellow with purple veins, 7-10 mm, equal or longer than calyx. Fruits oblong, 12-20 mm long, puberulent.

Habitat and distribution in Alabama: dry open woods, sandy pinehills; extreme southern part of state (Figure 1d).

Specimens examined. Baldwin County: *Diamond 16587*, 26 June 2006 (TROY). Covington County: *Kral 33652*, 5 October 1968

(VDB). Dale County: *Diamond 13177*, 12 May 2002 (TROY). Escambia County: *Diamond 13196*, 19 May 2002 (TROY). Geneva County: *Kral 35097*, 7 June 1969 (AUA, VDB). Houston County: *Kral 43148*, 9 June 1971 (AUA). Mobile County: *Kral 39618*, 3 June 1970 (JSU, VDB). Washington County: *Kral 31185*, 6 June 1968 (UNA, VDB).

3. *Rhynchosia minima* (Linnaeus) de Candolle, Prodr. 2: 385. 1825. [Figure 1e]

Dolichos minimus Linnaeus, Sp. Pl. 726. 1753.

Dolicholus minimus (Linnaeus) Medikus, Vorles. Churpfaelz. Phys.-Oecon. Ges. 2: 354. 1787.

Glycine minor Lagascay Segura, Elench. Pl. 8. 1816, nom. illegit.

Glycine reflexa Nuttall, Gen. N. Amer. Pl. 2: 115. 1818.

Glycine lamarckii Kunth, in Humboldt et al., Nov. Gen. Sp. 6: 424. 1824.

Rhynchosia punctata de Candolle, Prodr. 2: 385. 1825.

Rhynchosia rhombifolia (Willdenow) de Candolle var. *timoriensis* de Candolle, Prodr. 2: 386. 1825.

Rhynchosia candollei Decaisne, Nouv. Ann. Mus. Hist. Nat. 3: 473. 1834.

Rhynchosia mexicana Hooker & Arnott, Bot. Beechey Voy. 287. 1841.

Rhynchosia aureoguttata Andersson, Kongl. Vetensk. Acad. Handl. 1853: 252. 1855.

Rhynchosia exigua Andersson, Kongl. Vetensk. Acad. Handl. 1853: 252. 1855.

Rhynchosia minima (Linnaeus) de Candolle var. *lutea* Eggers, Bull. U.S. Natl. Mus. 13: 42. 1879.

Rhynchosia minima (Linnaeus) de Candolle var. *pauciflora* Kuntze, Revis. Gen. Pl. 1: 204. 1891.

Rhynchosia minima (Linnaeus) de Candolle var. *diminifolia* Walraven, Brittonia 22: 85. 1970.

Roots perennial. Stems trailing or twining, branched, glabrous to puberulent or villous. Leaves trifoliate; petioles 5-90 mm long; leaflets broadly ovate-acuminate to rhomboid, 10-35 mm long, glabrous to villous, gland dotted. Inflorescence 5-15 flowered; peduncles 10-90

mm long. Calyx 2.5-3.0 mm long, longest lobes equal or longer than tube; corolla yellow with purple or brown veins, 4-8 mm, longer than calyx. Fruits oblong-ovate to flaccate, 10-20 mm long, villous.

Habitat and distribution in Alabama: disturbed pinelands; known from two historical collections in south Alabama (Figure 1f).

Specimens examined. Autauga County: *Mohr s.n.*, July 1869 (US). Mobile County: *Mohr s.n.*, July 1870 (UNA).

4. *Rhynchosia tomentosa* (Linnaeus) Hooker & Arnott, Companion Bot. Mag. 1: 23. 1835. [Figure 2a]

Glycine tomentosa Linnaeus, Sp. Pl. 754. 1753.

Trifolium erectum Walter, Fl. Carol. 184. 1788.

Arcyphyllum erectum (Walter) Elliott, J. Acad. Nat. Sci. Philadelphia 1: 372. 1803.

Glycine tomentosa Linnaeus var. *erecta* (Walter) Michaux, Fl. Bor.-Amer. 2: 63. 1803.

Glycine erecta (Walter) Nuttall, Gen. N. Amer. Pl. 2: 114. 1818, non Thunberg 1800.

Glycine mollissima Elliott, Sketch Bot. S. Carolina 2: 235. 1823.

Rhynchosia erecta (Walter) de Candolle, Prodr. 2: 384. 1825.

Glycine caroliniana Sprengel, Syst. Veg. 3: 197. 1826.

Rhynchosia tomentosa (Linnaeus) Hooker & Arnott var.

erecta (Walter) Torrey & A. Gray, Fl. N. Amer. 1: 285. 1838.

Dolicholus drummondii Vail, Bull. Torrey Bot. Club 26: 116. 1899.

Dolicholus erectus (Walter) Vail, Bull. Torrey Bot. Club 26: 115. 1899.

Dolicholus tomentosus (Linnaeus) Vail, Bull. Torrey Bot. Club 26: 112. 1899.

Rhynchosia drummondii (Vail) K. Schumann, Bot. Jahrb. Syst. 26: 496. 1901.

Roots perennial. Stems erect, branched, densely villous. Leaves trifoliate, lower one rarely unifoliate; petioles 15-50 mm long; leaflets broadly ovate to elliptic, 35-70 mm long, densely puberulent or tomentose above, tomentose below. Inflorescence axillary, 10-30 mm

long, and short terminal, 7-15 mm long; peduncles 5-15 mm long. Calyx 5-9 mm long, lobes longer than tube; corolla yellow, 5-10 mm, equal or short than calyx. Fruits ovate-oblong to broadly oblong, 15-20 mm long, hirsute and puberulent.

Habitat and distribution in Alabama: dry woodlands, sandhills, woodland borders, rich woodlands; scattered throughout the state (Figure 2b).

Specimens examined. Autauga County: *Diamond* 6179, 29 July 1989 (AUA). Baldwin County: *Moore* 83, 15 May 1955 (AUA). Barbour County: *MacDonald* 11492, 27 June 1998 (UNA). Blount County: *Keener* 910, 6 June 1998 (UNA). Bullock County: *Diamond* 14165, 18 September 2003 (AUA, JSU, TROY, UNA, VDB). Butler County: *Diamond* 17964, 23 September 2003 (TROY). Calhoun County: *Whetstone* 12207, 9 September 1982 (JSU). Cherokee County: *Kral* 47626, 12 July 1972 (VDB). Chilton County: *Diamond* 15567, 27 July 2005 (TROY, VDB). Choctaw County: *Moore* 949, 8 September 1970 (AUA). Clarke County: *Kral* 41122, 5 September 1970 (VDB). Clay County: *Rutland* 460, 23 June 1975 (AUA). Cleburne County: *Adams s.n.*, 27 June 1957 (AUA). Colbert County: *Kral* 67598, 26 July 1981 (VDB). Conecuh County: *Diamond* 11983, 13 August 2000 (TROY). Coosa County: *Rutland* 1159, 2 September 1975 (AUA). Covington County: *MacDonald* 13273, 24 July 1999 (VDB). Crenshaw County: *Diamond* 16398, 17 May 2006 (TROY). Dale County: *Rundell* 260, 1 July 1997 (TROY). DeKalb County: *Price* 101, 25 July 1970 (AUA). Elmore County: *McDaniel* 7773, 28 September 1966 (UNA). Etowah County: *Hodge & Spaulding* 2716/6893, 23 June 1994 (JSU). Fayette County: *Haynes* 9593, 20 September 1997 (UNA). Geneva County: *MacDonald* 12933, 29 May 1999 (VDB). Greene County: *Thomas* 1695, 3 June 1968 (UNA). Hale County: *Maginness* 316, 13 June 1966 (UNA). Houston County: *Kral* 40011, 16 July 1970 (UNA, VDB). Jackson County: *Whetstone* 4528, 5 August 1994 (JSU). Jefferson County: *Barber* 922, 27 July 1984 (JSU). Lamar County: *Kral* 39789, 27 June 1970 (UNA). Lauderdale County: *Kral* 69506, 20 July 1982 (VDB). Lee County: *Robertson* 81, 23 August 1924 (AUA). Lowndes County: *Diamond* 14736, 30 September 2004 (AUA, TROY). Macon County: *Moore* 300, 9 July 1970 (AUA). Marengo County: *Kral* 31220, 6 June 1968

(VDB). Marshall County: *Spaulding* 2286, 12 July 1992 (JSU). Mobile County: *Lelong* 6513, 24 May 1972 (USAM). Morgan County: *Kral* 41169, 22 September 1970 (VDB). Randolph County: *Nixon et al.*, 4061, 15 July 1988 (JSU). Russell County: *Kral* 62284, 8 July 1978 (JSU, VDB). Shelby County: *Kral* 51154, 11 August 1973 (UNA). St. Clair County: *Kral* 65949, 3 July 1980 (TROY). Sumter County: *Spaulding* 12036, 24 August 2003 (AUA, JSU, TROY, UNA, VDB). Talladega County: *Rutland* 1040, 29 August 1975 (AUA). Tallapoosa County: *Kral* 62150, 25 June 1978 (JSU, VDB). Tuscaloosa County: *Burdett* 72, 26 June 1971 (AUA). Wilcox County: *Kral* 82408, 21 May 1993 (VDB).

5. *Rhynchosia difformis* (Elliott) de Candolle, Prodr. 2: 384. 1825.

[Figure 2c]

Glycine tomentosa Linnaeus var. *volubilis* Michaux, Fl. Bor.-Amer. 2: 63. 1803.

Arcyphyllum difforme Elliott, J. Acad. Nat. Sci. Philadelphia 1: 372. 1818.

Rhynchosia tomentosa (Linnaeus) Hooker & Arnott var. *volubilis* (Michaux) Torrey & A. Gray, Fl. N. Amer. 1: 284. 1838.

Rhynchosia volubilis A. W. Wood, Class-Book Bot., ed. 1861. 321. 1861, non Loureiro 1790.

Dolicholus lewtonii Vail, Bull. Torrey Bot. Club 26: 113. 1899.

Dolicholus tomentosus (Linnaeus) Vail var. *undulatus* Vail, Bull. Torrey Bot. Club 26: 113. 1899.

Rhynchosia lewtonii (Vail) Small, Man. S.E. Fl. 714. 1933.

Roots perennial. Stems trailing, twining, rarely semi-erect, simple or branched, strigose or hirsute. Leaves trifoliate, lower one rarely unifoliate; petioles 20-50 mm long; leaflets suborbicular to elliptic, 25-50 mm long, glabrous to strigose above, villose below. Inflorescence axillary, 10-20 mm long; peduncles 5-15 mm long. Calyx 8-12 mm long, lobes longer than tube; corolla yellow, 8-10 mm, equal or short than calyx. Fruits ovate-accumbent to broadly oblong, 12-20 mm long, puberulent and villous.

Habitat and distribution in Alabama: mixed and deciduous woodlands, sandhills, old fields and roadsides; throughout southeast Alabama and widely scattered in the northern one-half of the state. (Figure 2d).

Specimens examined. Autauga County: *Gunn 708*, 14 June 1982 (AUA, UNA). Barbour County: *Moore 441*, 29 July 1970 (AUA). Butler County: *Diamond 12123*, 9 September 2000 (TROY). Coffee County: *Martin 873b*, 10 August 2000 (TROY). Crenshaw County: *Diamond 11435*, 11 October 1998 (AUA). Dale County: *Rundell 408*, 29 August 1997 (TROY). Dallas County: *Kral 32774*, 21 August 1968 (VDB). Fayette County: *Moore 2977*, 14 September 1954 (AUA). Henry County: *Kral 79307*, 30 June 1991 (VDB). Houston County: *Kral 35747*, 25 July 1969 (VDB). Jackson County: *Henderson 472*, 25 July 1981 (AUA). Macon County: *Botts 189*, 2 July 1976 (AUA). Montgomery County: *Diamond 12474*, 3 July 2001 (TROY). Pike County: *Hall 138*, 21 September 2000 (TROY). Russell County: *Kral 62065b*, 19 June 1978 (VDB). Talladega County: *Mohr 407*, June 1892 (UNA).

DISCUSSION

In Alabama, *Rhynchosia*, is a common genus of open, dry woodlands, savannahs, prairie openings, fields and roadsides. The taxa can normally be recognized by a combination of conspicuously glandular foliage, yellow corolla, and 1-2 seeded pods.

Both Alabama collections of *Rhynchosia minima* (Linnaeus) de Candolle are historical. Charles Mohr made the Autauga County collection in July 1869 and the Mobile County collection in July 1870. It is possible that this species has been extirpated from the state. However, a collection by James Burkhalter in September 1987 from Escambia County, Florida, documents the continued presence of the species immediately adjacent to Alabama.

Of the 146 herbarium specimens of *Rhynchosia tomentosa* (Linnaeus) Hooker & Arnott that were studied during this project, all were the typical variety. The second variety, *R. tomentosa* var. *mollissima* (Elliott) Torrey & Gray is known from Florida, Georgia and

South Carolina. In Florida, it has been reported from Leon County, which is approximately 100 km southeast of Houston County, Alabama. Because of the proximity of the Florida collection to Alabama, this taxon possibly occurs in the southeastern section of the state. The typical variety has persistent stipules, several axillary inflorescences, 1-3 cm long and an occasional short terminal raceme. Variety *mollissima* differs from the typical variety by having caducous stipules and a single, strongly exerted, terminal inflorescence 5-20 cm long.

Rhynchosia michauxii Vail is another taxon that possibly occurs in the southern tier of Alabama counties. Although this taxon has not been reported from state, it does occur in Okaloosa County, Florida, which is immediately south of Covington and Escambia Counties.

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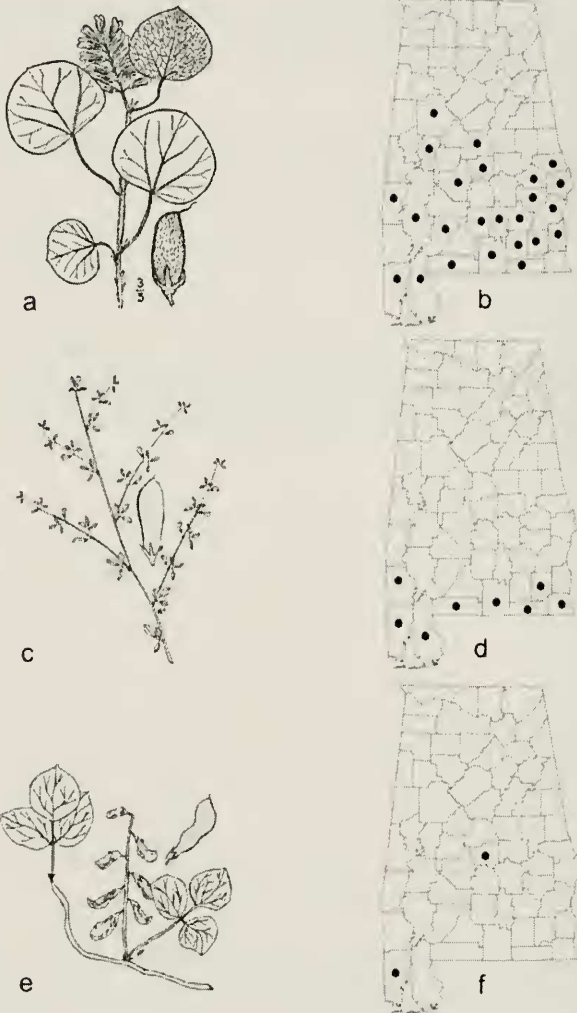


Figure 1. a) illustration of *Rhynchosia reniformis*, b) distribution of *R. reniformis*, c) illustration of *R. cytisoides*, d) distribution of *R. cytisoides*, e) illustration of *R. minima*, f) distribution of *R. minima*

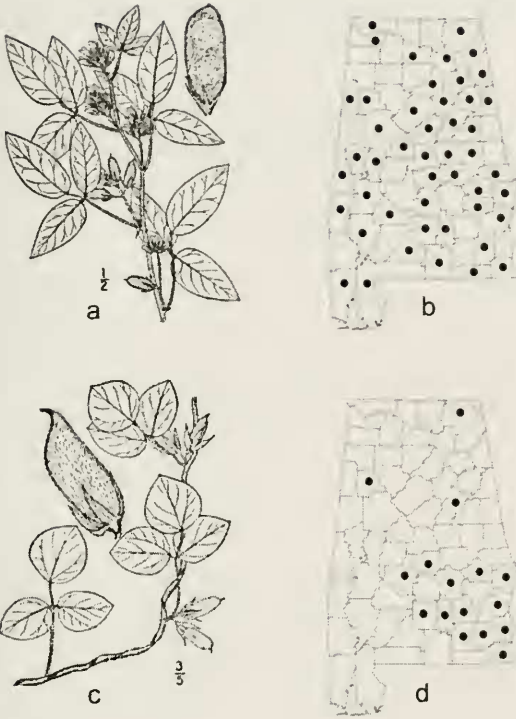


Figure 2. a) illustration of *Rhynchosia tomentosa*, b) distribution of *R. tomentosa*, c) illustration of *R. difformis*, d) distribution of *R. difformis*.